

Math Study Skills Tips

THE RIGHT MINDSET

Not a “Math Person”? Join the crowd! In actuality, there is no such thing as a “Math Person”. Everyone has to work hard to understand and apply mathematical concepts. More importantly, with proven strategies and regular practice, anyone can succeed in math!

START OF THE QUARTER

Know the course requirements; read the syllabus and record quiz and exam dates in a calendar or planner.

Schedule weekly study time. Plan two hours of study/homework time for each hour in-class.

Start a new notebook for the class. Use the notebook for reading notes, lecture notes, homework, and a metacognitive journal.

Get your classmates’ contact info and form or join a study group.

IN CLASS

Attend class! Math continuously builds on previous knowledge, so missing a lecture has a big impact.

If you need to miss class, talk to your instructor or classmates immediately to make up what you missed.

Copy all of the examples, definitions, drawings, and diagrams. If you are not sure of something, make a note to come back and review it later.

Listen closely and ask questions. If you are still unsure, go to office hours, check with a classmate, or go to the Tutoring Center.

HOMEWORK/ASSIGNMENTS

Find a work environment that fits your needs. In addition to tutors and opportunities to collaborate, the Tutoring Center has calculators, math handouts, textbooks, and solutions for many courses. We now have a quiet space open M-R 12-4 pm.

Complete your assignments daily and as soon as possible after class. Make up any missed work as soon as possible.

INSTRUCTOR SUGGESTION:

Work through every other assigned problem using your book, notes, and tutor assistance. Then go back and do the problems you skipped without using any resources.

Review the text before attempting an assignment. Read the directions for the assignment closely.

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Work to understand definitions and rules not just memorize them.

Work neatly, slowly, and carefully. It is easier to find errors if your work is neat. Speed will come as you master a concept. Write each step, even calculations you did in your head, so you can catch any errors and engrain the steps in your mind.

METACOGNITIVE JOURNAL:

Keep a journal of your common mistakes, like losing a negative sign or not distributing. Pay special attention to these on exams and quizzes.

Stay positive, even if you do not get the answer on the first try. If you are having trouble with a problem, note it and come back to it later.

Take a break if you get frustrated. It is hard to think logically and form memories when you are emotional.

Check your answers. Plug them back into the problem. "Is the arithmetic correct? Do the units match? Does the answer make sense?"

Get any questions answered as soon as possible then re-work the problem to make sure you understand.

Keep working until you can do the problems without referring to the text or lecture notes.

Work through example problems from the book for extra practice.

METACOGNITIVE JOURNAL:

After finishing each assignment ask yourself: "What types of problems were assigned? How do these problems relate to the text and lecture notes? How do they relate to previous material? What new steps did I learn? What rules did I learn and use? Are there exceptions to those rules?"

STUDY TIP:

Find 2-3 problems representative of the assignment. Copy each problem and its page number on one side of a flash card, and put the solution on the back. At the end of the week (and/or the night before a quiz), try the problems. If you have trouble with a problem, go over the section until you understand. Before an exam, shuffle the cards and test yourself.

TEXTBOOK READING

Reading your text is the secret to success! Math is about ideas. Problems are expressions of these ideas. There are an infinite variety of mathematics problems. While you cannot memorize every problem-solving technique, if you learn key concepts, you can solve any type of problem involving those concepts.

READ BEFORE LECTURE:

Read the text before class to prepare for lecture and form questions.

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Skim the introduction, section titles, and summary. Pay special attention to information in boxes and to bold and italicized words. Scan for big ideas. Ask yourself: “What is the main point of the chapter? How does it relate to what I already know?”

Read a second time to fill in the details. Try to understand the narrative—the “story” behind the math.

Think about each of the definitions, theorems, and formulas that you encounter—Keep a list of definitions, principles, and rules in your notebook.

MATH = A NEW LANGUAGE

Consider new vocabulary and language. Some words have a different meaning when used in a mathematical context. Make sure you understand and use the words correctly. Use the glossary, index, or appendices for reference.

Study the examples. Consider every step. Ask yourself what each example illustrates. Create your own examples that relate to your interests.

Look at the pictures. Read the captions. Focus on how each image illustrates a particular idea.

READ AFTER LECTURE:

Compare your text notes with the notes from class. Are the methods the same or different? Which method makes the most sense to you?

METACOGNITIVE JOURNAL:

Note things that do not seem to make sense. “Are there incongruities between the text and lecture? Do the concepts clash with my previous understanding?” Write these down and come back to them later. If they still do not make sense, discuss them with your instructor, classmate, or tutor.

Review the text before attempting your assignment. Read the directions carefully. Go back to the text if you are having trouble applying concepts.

WAYS TO STUDY

Practice and review daily and weekly. Consistent studying throughout the quarter will eliminate the need to cram before an exam and help you retain information longer.

THROUGHOUT THE QUARTER:

Study in groups. See if the Tutoring Center offers a study group for your course. If not, form your own. Talking about math will help you identify gaps in your understanding and solidify concepts.

Practice, practice, practice! Use chapter review exercises and the representative problems you selected from each section.

Review your list of definitions, principles, and rules. Be clear about when and why each is used and how it is similar or different from others.

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Review your metacognitive journal to remind yourself of common mistakes, misconceptions, and important ideas.

Seek help early in the quarter. Bring your work to your instructor's office hours or a tutor.

WEEK PRIOR TO EXAM:

Begin studying for the test at least three days in advance so you can review all the material, and get help with anything you do not understand.

Study when you have the most energy to increase concentration and focus.

Create a study guide using your text and lecture notes, study partners, and your metacognitive journal.

Learn all you can about the test. Talk to the instructor or students who have had the course to get a feel for which concepts are emphasized on exams.

Take time to reflect and connect. *"How are the sections related? How do the concepts build? What types of problems can I now solve which I could not solve previously?"*

Make a practice exam using problems that appeared in the homework, and take it under actual testing conditions (no notes/books, time limit, etc.). Quiz your classmates or study partners.

If you are still confused about a concept, use all of your resources: go to office hours, read the textbook, and talk with classmates and/or tutors.

DAY PRIOR TO EXAM:

Briefly review material you have already learned. Do not try to learn any new material right before the test.

Sleep and eat well.

AFTER EXAM:

When you get your test back, review it to determine what type of mistakes you made and why. Schedule an Exam Wrapper appointment at the Tutoring Center to help strategize for the next test.

To discuss these and other tips with a trained Peer Advisor who can help you set goals and develop a study plan, make a study skills appointment at the Tutoring Center.